

AIRCRAFT ACCIDENT REPORT
OPNAV FORM 3750-1 (REV. 3-63) Page 1
0107-601-6985

SPECIAL HANDLING REQUIRED in accordance with
Para. 66, OPNAV INSTRUCTION 3750.6, effective edition

ORIGINAL

OFFICER REPORT 3780-8

PART I GENERAL

SECTION A. IDENTIFICATION		SECTION B. CONTRIBUTING FACTORS		SECTION C. PERSONNEL DATA	
1. AIRCRAFT ACCIDENT BOARD APPOINTED BY CO, NAS LOS ALAMITOS		2. SERIAL NO. 3-68A		3. PTS (LOCAL) OF WISHAP 171515U APR 68	
4. MODEL AIRCRAFT A-4A		5. BUREAU NUMBER 137828			
6. TO: Commander, Naval Aviation Safety Center		7. LOCATION OF WISHAP 082 DEG. MAG 13 NM FM JULIAN FOR, CALIFORNIA		8. DAMAGE ALFA	
8. VIA: (a) CO, NAS LOS ALAMITOS (b) CNARESTRA (c) CHATRA		9. TIME OF DAY DAY		10. TIME IN FLIGHT 1:05	
		11. CLEARED FROM NAS LOS ALAMITOS		12. FLIGHT CODE 1A1M	
		13. TYPE CLEARANCE VFR		14. AIRSPEED 340 P	
		15. ALTITUDE 4000'		16. A/C WEIGHT 16,310	
17. BRIEF DESCRIPTION OF WISHAP ENGINE FAILURE - PILOT EJECTED		18. ELEVATION AT TIME OF WISHAP 4000'		19. TERRAIN 2600'	
20. LIST MODEL, GUN, REPORTING CUSTODIAN AND DRAMATIC CLASSIFICATION OF ANY OTHER A/C INVOLVED (Complete OPNAV Form 3750-1 for each A/C)					
NONE					
• FACTOR			• FACTOR		
1. PILOT ERROR IN TECHNIQUE/JUDGMENT	9. SERVICING PERSONNEL		17. WEATHER		
2. PILOT DEVIATION FROM NATOPS PROCEDURES	10. LANDING SIGNAL OFFICER		18. DESIGN AIRCRAFT		
3. PILOT INCORRECT OPERATION OF A/C SYSTEM	11. OTHER PERSONNEL (Specify)		19. DESIGN CREW EQUIPMENT		
4. PILOT OTHER (Specify)	12. ADMINISTRATIVE		20. DESIGN OTHER (Specify)		
5. CREW	13. FACILITIES: RUNWAY, OVERRUN TAXIWAY, FLIGHT DECK		21. ROLLING/PITCHING DECK ROUGH SEAS		
6. MAINTENANCE PERSONNEL	14. FACILITIES: NAV AIDS, LANDING AIDS (SCA, CCA, ILS, MIRROR)		22. MATERIAL FAILURE/MALFUNCTION		
7. MAINTENANCE SUPERVISORY PERSONNEL	15. FACILITIES: CATAFULT, ARRESTING GEAR (SNIP OR FIELD)		23. UNDETERMINED		
8. SUPERVISORY OTHER (Specify)	16. FACILITIES OTHER (Specify)		24. OTHER (Specify)		
1. NAME LAST, FIRST, & MIDDLE INITIAL PILOT IN CONTROL AT TIME OF WISHAP SHAFER, JERRY P.		2. GRADE LT	3. RATE (b) (6)	4. SERVICE DATE 1315	5. LENGTH OF SERVICE USNRA
6. AGE		7. GRADE (b)	8. POSITION 6	9. BILLET PILOT	10. DURATION COCKPIT
CO-PILOT IDENTITY & SIGNATURE SEPARATE PAGE 11					
NONE					
ITEM			ITEM		
11. ALL MODELS		1361	17. CV LANDINGS DAY/NIGHT		ALL 324 / 94
12. ALL MODELS IN LAST 12 MONTHS		110	18. FCLP LANDINGS LAST 6 MONTHS DAY/NIGHT		IN MODEL 312 / 94
13. ALL MODELS IN LAST 3 MONTHS		38	19. INSTRUMENT HOURS LAST 3 MONTHS ACTUAL/SIMULATED		ALL 0 / 0
14. A/C ALL SERIES THIS MODEL		1046	20. NIGHT HOURS LAST 3 MONTHS		IN MODEL 2 / 5
15. A/C ALL SERIES THIS MODEL LAST 12 MONTHS		106	21. TOTAL HOURS IN JETS (if jet mishap)		21
16. A/C ALL SERIES THIS MODEL LAST 3 MONTHS		18	22. LAST PRIOR FLIGHT ALL SERIES THIS MODEL		DURATION 28 MARCH 1968
23. DATE/GRADE LAST NATOPS STANDARDIZATION CHECK		3 AUGUST 1967	24. TYPE INSTRUMENT CARD		STANDARD
• OTHER PERS.		• OTHER PERS.			
25. NAME (LAST, FIRST, & MIDDLE INITIAL)		26. GRADE	27. RATE	28. BRANCH OF SERVICE	29. FILE/SERVICE NO.
NONE					
30. UNIT		31. PAYROLL	32. BILLET	33. POSITION	

ORIGINAL

PART II MAINTENANCE, MATERIAL, AND FACILITIES DATA										
A. AIR HISTORY	1. DATE OF MANUFACTURE	2. FLIGHT HRS. SINCE ACCEPTANCE	3. NO. OF PAR/ OVERHAUL	4. MONTHS SINCE LAST PAR/OVERHAUL	5. FLT. HRS. SINCE LAST PAR/OVERHAUL	6. LAST/PAR OVERHAUL ACTIVITY	7. TYPE OF LAST CHECK PERFORMED	8. FLIGHT HOURS SINCE LAST CHECK	9. DAYS SINCE LAST CHECK	
		30 APRIL 1956	1771	3	16	518	NAS ALAMEDA	4th CALENDAR 10 MAR 1968	29.0	38
B. ENGINE HISTORY	ENGINE MODEL	2. ENGINE SERIAL NUMBER	3. FLIGHT HRS. SINCE ACCEPTANCE	4. NUMBER OF OVERHAULS	5. WAS DIR. REQUESTED?	6. FLT. HRS. SINCE LAST OVERHAUL	7. LAST OVERHAUL ACTIVITY	8. TYPE OF LAST CHECK PERFORMED	9. FLIGHT HOURS SINCE LAST CHECK	
(1)	J-6SW16A	617041	1415	2	YES	68	NAS ALAMEDA	1st CALENDAR 10 MAR 1968	29.0	
(2)										
(3)										
(4)										
C. COMPONENT HISTORY	1. COMPONENT INVOLVED NOMENCLATURE	2. MANUFACTURERS PART NUMBER	3. TOTAL HRS. ON PART	4. NO. OF OVERHAULS	5. HOURS SINCE LAST OVERHAUL	6. OVERHAUL ACTIVITY	7. WAS DIR. REQUESTED?	8. SER. NO. F/N/R/M/FUR		
(1)										
(2)										
(3)										
(4)										
D. INCIDENTS & GROUND ACCIDENTS	1. PARTS REPAIRED				2. PARTS REPLACED					
	PART NUMBER	NOMENCLATURE		3. DIRECT MESSAGES INFO 422		PART NUMBER	NOMENCLATURE			
E. ENGINE FAILURES	JET ENGINE FLAMEOUT (INCLUDE INTENTIONAL SECURING TO PREVENT ENGINE DAMAGE)									
AT TIME OF FLAMEOUT	1. ALTITUDE	2. TAS	3. RPM	4. EGT	5. MANEUVER AT TIME OF FLAMEOUT	6. FUEL FLOW	7. ATTITUDE			
0	4000	250 K	BELLOW IDLE	900°	LEVEL FLIGHT	NORMAL	LEVEL FLIGHT			
8. G FORCES	9. RELIEF	10. ALTITUDE	11. TAS	12. MAX RPM	13. FUEL CONTROL	14. NO. RELIEF ATTEMPTS				
0	0	NA	NA	NA	PRIMARY	0				
INTENTIONAL SECURE NO	15. ENGINE SYMPTOMS TWO EXPLOSIONS FOLLOWED BY RPM LOSS				16. CAUSE OF SYMPTOMS UNDETERMINED, SUSPECT 1st STAGE COMPRESSOR BLADE FAILURE					
RECIPROCATING ENGINE FAILURE										
17. ALTITUDE	18. TAS	19. ATTITUDE	20. RPM	21. NARF	22. TORQUE/NARF	23. FUEL FLOW PRESSURE	24. OIL PRESSURE			
INTENTIONAL SECURE	25. ENGINE SYMPTOMS				26. CAUSE OF SYMPTOMS					
IDENTIFY OTHER REPORTS CONCERNING THIS MISFAIR										
1. AMFUR SERIAL NUMBER _____ 2. DIR MESSAGE REQUEST DATE-TIME GROUPNAS LOS ALAMITOS 201745Z APR 68. INFO BASIC OR DIR REQUEST. See para. 38 OPNAVINST P3750.6B 3. OTHER NARF EL CENTRO 180420Z APR 68 PRELIMINARY MSG REPORT OF AIRCRAFT ACCIDENT. 4. NAS LOS ALAMITOS 190040Z APR 68 SUPPLEMENTARY MSG REPORT OF AIRCRAFT ACCIDENT 5. NARF ALAMEDA MSG 012302Z MAY 68 ENGINE FAILURE/MALFUNCTION INVESTIGATION REPORT.										
F. OTHER REPORT										

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SPECIAL HANDLING REQUIRED in accordance with
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1. EQUIPMENT INVOLVED CATAPULT	2. ARRESTING GEAR	3. PRESSURE SETTING	4. WIND OVER DECK	5. RELATIVE WIND	6. APPROX/END SPEED
6. MARK NUMBER	7. MODEL NUMBER	8. LOCATION ON SHIP	9. LAUNCHING SPONGE AND BRIDLE ARRESTOR		

10. CATAPOULT/ARRESTING GEAR BULLETINS OR NOMOGRAMS USED

11. This portion shall be completed whenever (1) an aircraft accident involves arresting gear barrier and/or barricade equipment, or (2) an aircraft accident involves malfunctioning of arresting gear, barrier and/or barricade equipment. Incidents or routine damage to cables, weldings and other expendable equipment need not be reported herein.

G. SHIPS DATA ENGAGED	12. DECK RUNOUT (FEET)	13. RAM TRAVEL (INCHES)	14. CONTROL VALVE SETTINGS CONSTANT PRESSURE		15. ACCUMULATOR PRESSURE (PSI)	16. COMMENTS (for cable failures specify no. landings and months in service)
	DONE (P.S.I.)	ASTIC	OUT (WT. LOS.)			
DECK PENDANT						
DECK PENDANT						
BARRIER/BARRICADE						

FOR ACCIDENTS ABOARD CARRIERS (Complete on pilot)

1. DATE DEPLOYED CONUS	3. DAY HOURS/LANDINGS SINCE DEPLOYMENT	4. DAY HOURS/LANDING LAST 30 DAYS
2. NO. DAYS OPERATING PERIOD		
5. INST. HOURS LOGGED SINCE DEPLOYMENT ACTUAL/SIMULATED	6. NIGHT HOURS/LANDINGS SINCE DEPLOYMENT	7. NIGHT HOURS/LANDING LAST 30 DAYS

WEATHER AT SCENE OF MISHAP

1. CEILING 5500 FT	2. VISIBILITY 25 NM	3. WIND DIRECTION AND VELOCITY WEST/15 - 20 KTS	4. TEMPERATURE Humid 72°F	5. DEW POINT 34	6. ALTIMETER SETTING 29.85
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7. OTHER WEATHER CONDITIONS (Winds aloft, icing level, sea state, density altitude, etc. appropriate)

NONE

PART III ADDITIONAL INFORMATION

PART SECTION	ITEM	REMARKS	2. COPY DISTRIBUTION
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2 CC NAVAVSAFECON DIRECT (AAR)
1 CC BUINPS DIRECT (AAR)
1 CC CNATRA
1 CC CHARES TRA
1 CC NAVPLANTREPO LONG BEACH
1 CC WAS LOS ALAMITOS
1 CC NAVAERO REC FAC EL CENTRO

3. GOVERNMENT PROPERTY COST DAMAGE TO	4. PRIVATE PROPERTY COST DAMAGE TO	5. DATE SUBMITTED TO CO
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- 5 MAY 1969

PART IV SIGNATURES OF THE BOARD

1. SENIOR (b) (6)	2. (b) (6)
LCDR [REDACTED] USNR (TAR) NAS LOS ALAMITOS AV SAFETY OFFICER	LCDR [REDACTED] USNR (TAR) NAS LOS ALAMITOS ANG, MAINT OFFICER
3. FLIGHT (b) (6)	4. (b) (6)
LT [REDACTED] (DC) USN NAS LOS ALAMITOS	LCDR [REDACTED] USNR (TAR) NAS LOS ALAMITOS ASST FA PGH MGR

* When preparing Incident and Ground Accident reports, items indicated by an asterisk in the upper right hand corner must be filled in. Other items considered appropriate should also be filled in.

SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH OPNAVINST 3750.6 SERIES

PART V - THE ACCIDENT

A. On 17 April 1968, LT SHAVER, VA-773, NAS Los Alamitos, pilot of A-4A, BUNO 137828, was participating in a Supplementary Training and Readiness Period (STARP) and was scheduled for a low level navigation training flight. LT JOHNSON, VA-771, NAS Los Alamitos, also participating in a STARP, was scheduled as LT SHAVER's wingman.

B. LT SHAVER briefed the flight and filed the required DD-175 for the flight on Miramar ~~SANDBLOWER~~ Route 326. The flight departed NAS Los Alamitos at 1410U. Except for a few deviations required by existing weather, the flight progressed normally. The low level navigation flight was terminated on course on the third leg of the route. At that time, the aircraft were over the northern part of the Salton Sea, California and a climb had commenced. LT SHAVER, in A-4A, BUNO 137828, was climbing through 8,000 feet MSL at 90% RPM and 280 Knots IAS when he heard and felt a small explosion, followed by vibration. He reduced power and informed his wingman that his aircraft had problems.

C. LT SHAVER checked all instruments; all were normal, except the exhaust gas temperature (EGT) which was rising rapidly. LT SHAVER then reduced power from 80% to idle, but EGT continued to rise. He secured the air conditioning unit and switched to manual fuel control, then slowly added power. EGT went to 900 degrees. He again reduced power to idle and returned fuel control to primary. As RPM was increased the EGT increased and remained between 800 to 900 degrees.

D. Loss of altitude required adding power to 80% RPM in attempt to maintain a stable altitude. EGT remained at 900 degrees.

E. Within three minutes after the first explosion, LT SHAVER, heard and felt a second explosion milder in force and noise than the first explosion. Concurrent with the second explosion the engine commenced to "unwind". By this time, altitude had become critical and LT SHAVER ejected from the aircraft.

F. After LT SHAVER left the aircraft it turned left and descended into a rocky slope. The aircraft crashed about 17 miles SSE of Borrego Springs, California in a remote unpopulated area of the Anza-Borrego Desert State Park, California. The aircraft exploded and disintegrated upon impact with rocky terrain.

G. LT SHAVER ejected from the aircraft at about 4000' MSL. He landed in a dry wash about 2 miles North of the point where the aircraft crashed. He received (b) (6) when he was dragged slightly by the parachute after landing.

H. A park ranger and a man and his son in a camper in the area saw the explosion from the crashed aircraft and saw LT SHAVER descending in the parachute. They arrived at LT SHAVER's location in about 15 minutes. The park ranger took LT SHAVER to the park headquarters in Borrego Springs.

I. A C-45 from NAF El Centro picked LT SHAVER up at the Borrego Springs airport and took him to NAF El Centro where he was examined by a flight surgeon. LT SHAVER was found to be uninjured except for the abrasions received from being dragged by the parachute. An S-2 aircraft from El Centro returned LT SHAVER to NAS Los Alamitos during the evening of 17 April 1968.

J. A security guard for the aircraft wreckage was furnished by NAF El Centro.

K. Enclosure (2) is the statement of the pilot, LT SHAVER. Enclosure (3) is the statement of the wingman, LT. JOHNSON.

SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH OPNAVINST 3750.6 SERIES

PART VI - THE DAMAGE TO THE AIRCRAFT

A. The aircraft, A-4A, BUNO 137828, received alfa damage when it crashed, uncontrolled, into a rocky slope. Impact angle was estimated at approximately 55 degrees. At the time of impact, the aircraft was traveling in excess of 280 knots IAS and was in a slight left wing, nose down attitude.

B. Upon impact, the aircraft gouged the rocky terrain to a depth of approximately three to four feet for a distance of about 20 to 30 feet. The aircraft exploded and disintegrated, scattering fuel and debris throughout an area approximately 300 feet laterally and 500 feet upslope from the point of initial impact. There was little ground fire, due to the lack of foliage in the area.

C. The aircraft crashed on a heading of approximately 135 degrees magnetic. The right main gear strut remained near the right edge of the initial impact area. The turbine section of the engine came to rest about 75 feet upslope from the initial impact point. The tail cone and horizontal stabilizer pieces were found approximately 100 feet beyond the turbine section of the engine. The compressor section of the engine was located approximately 100 feet beyond the tail cone and horizontal stabilizer.

D. Enclosure (4) shows the crash site and wreckage scatter pattern. Enclosures (5), (6) and (7) are photos of the engine pieces.

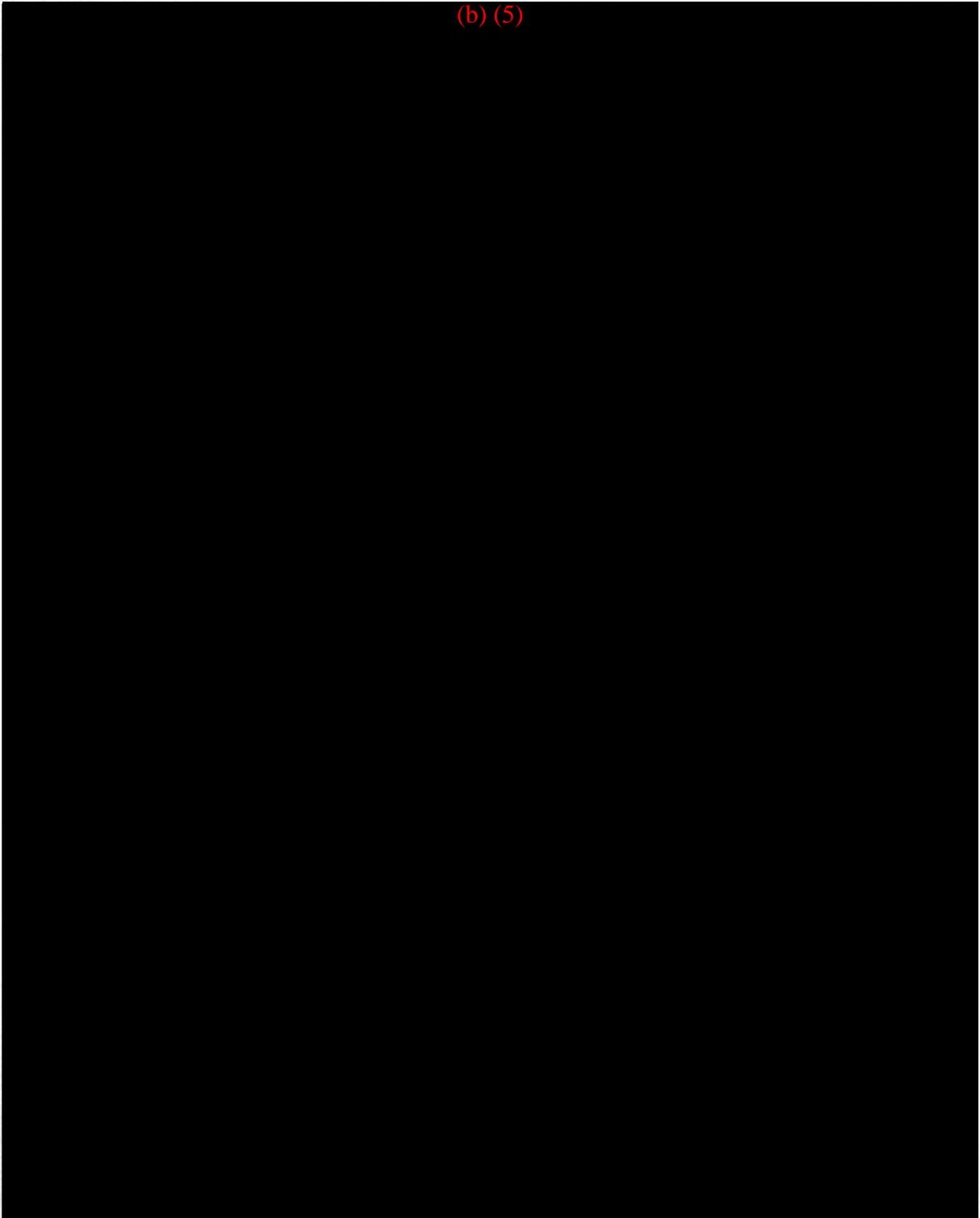
E. The engine, J-65-W16A, serial number W617041 was removed to NARF Alameda for a priority failure/malfunction investigation. —

F. When released by the Naval Aviation Safety Center the remaining wreckage will be salvaged/recovered in accordance with OPNAVINST 3750.6 SERIES.

SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH OPNAVINST 3750.6 SERIES

PART VII - THE INVESTIGATION AND ANALYSIS

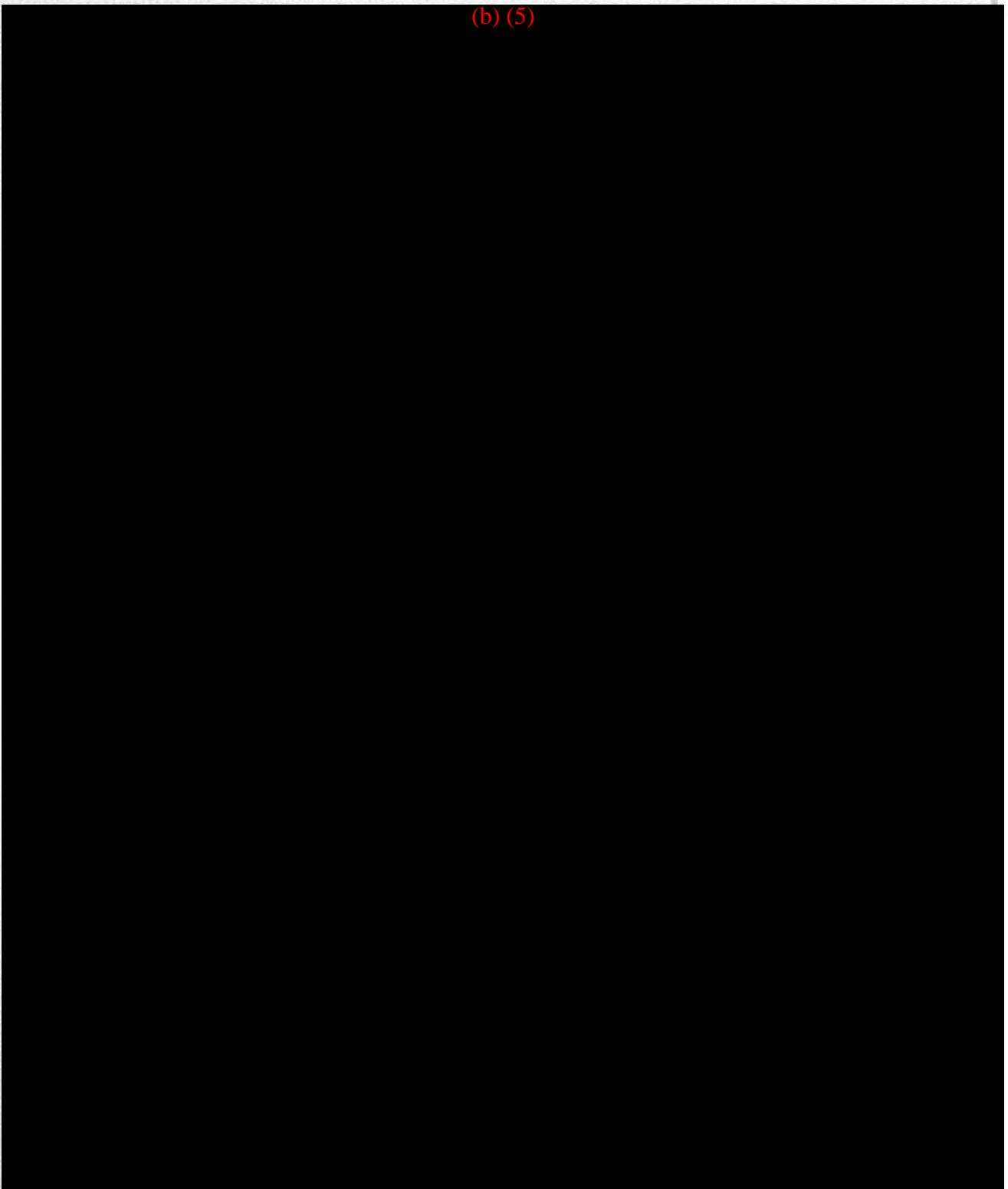
(b) (5)



SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH OPNAVINST 3750.6 SERIES

PART VII - THE INVESTIGATION AND ANALYSIS, continued

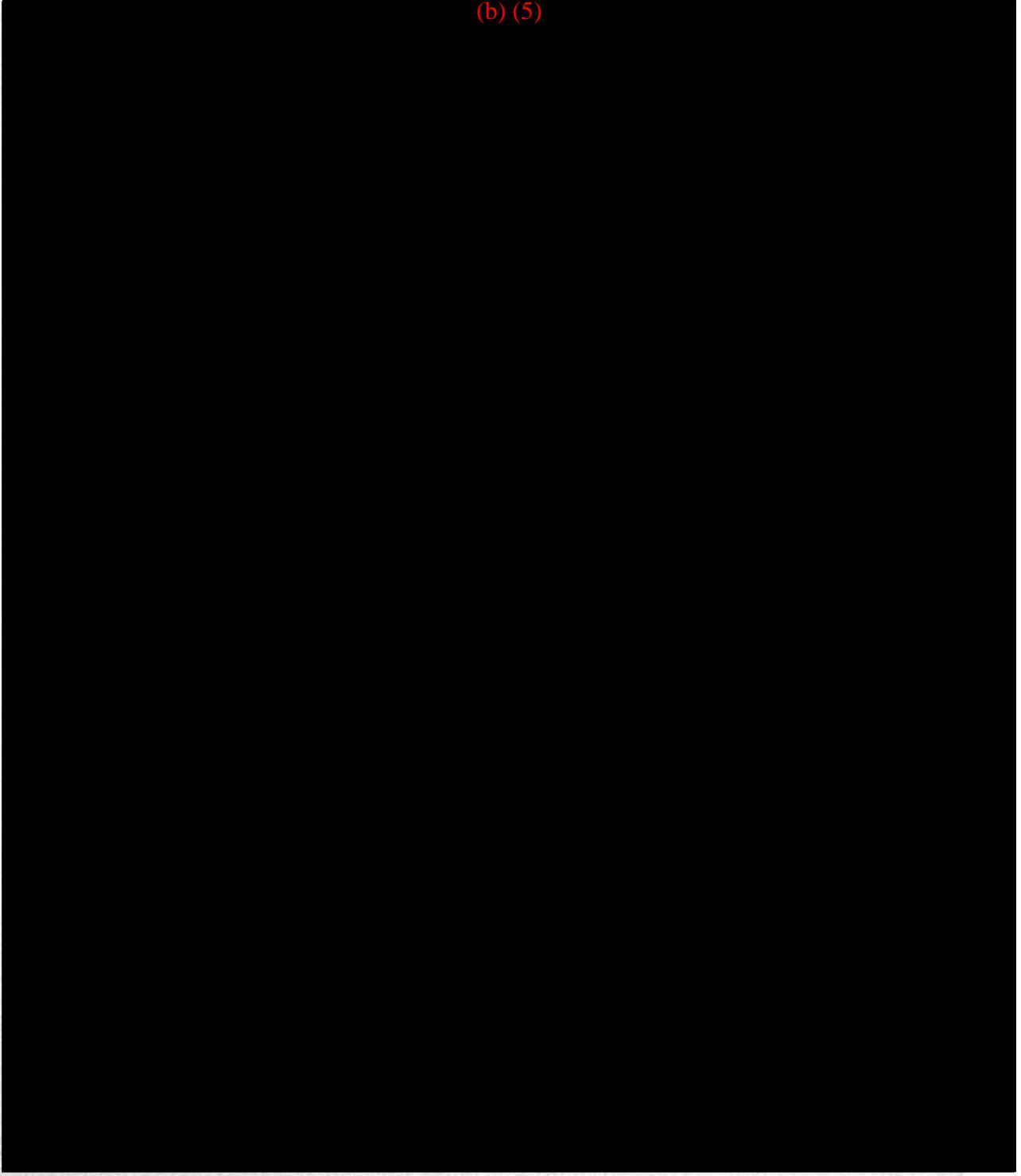
(b) (5)



SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH OPNAVINST 3750.6 SERIES

PART VII - THE INVESTIGATION AND ANALYSIS, continued

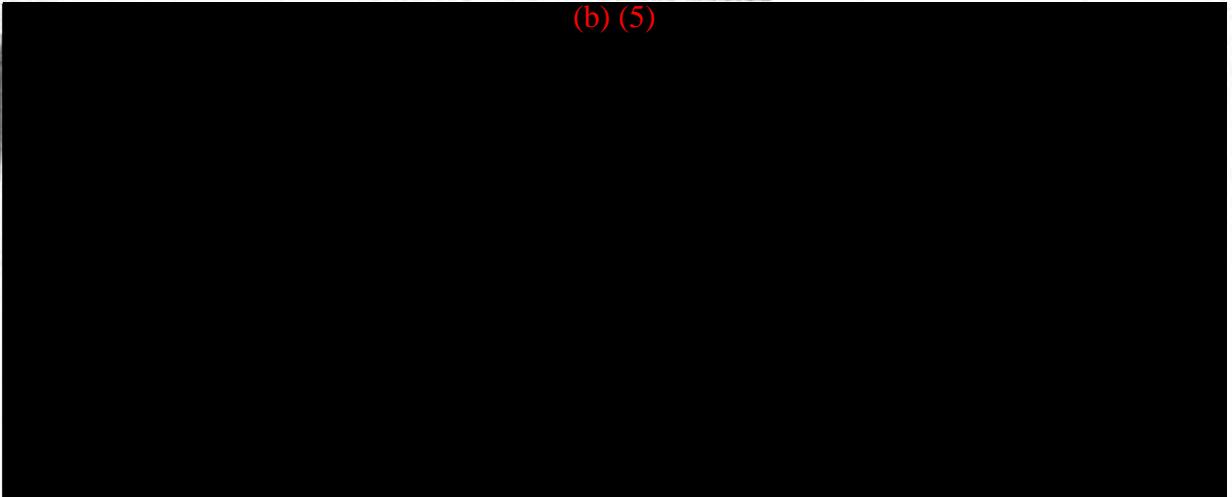
(b) (5)



SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH OPNAVINST 3750.6 SERIES

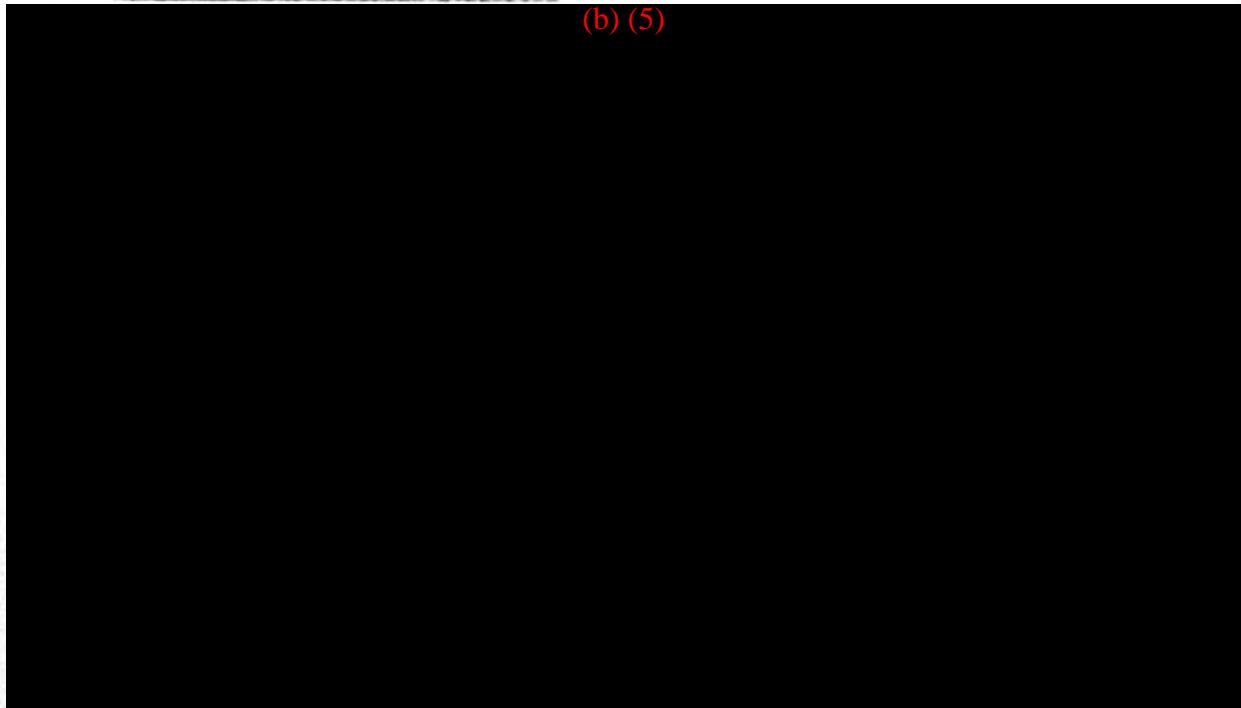
PART VII - THE INVESTIGATION AND ANALYSIS, continued

(b) (5)



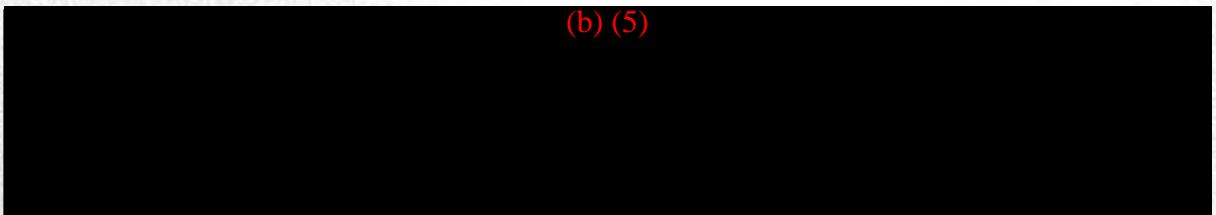
C. SAFETY/SURVIVAL EQUIPMENT FACTORS

(b) (5)



D. OTHER FACTORS

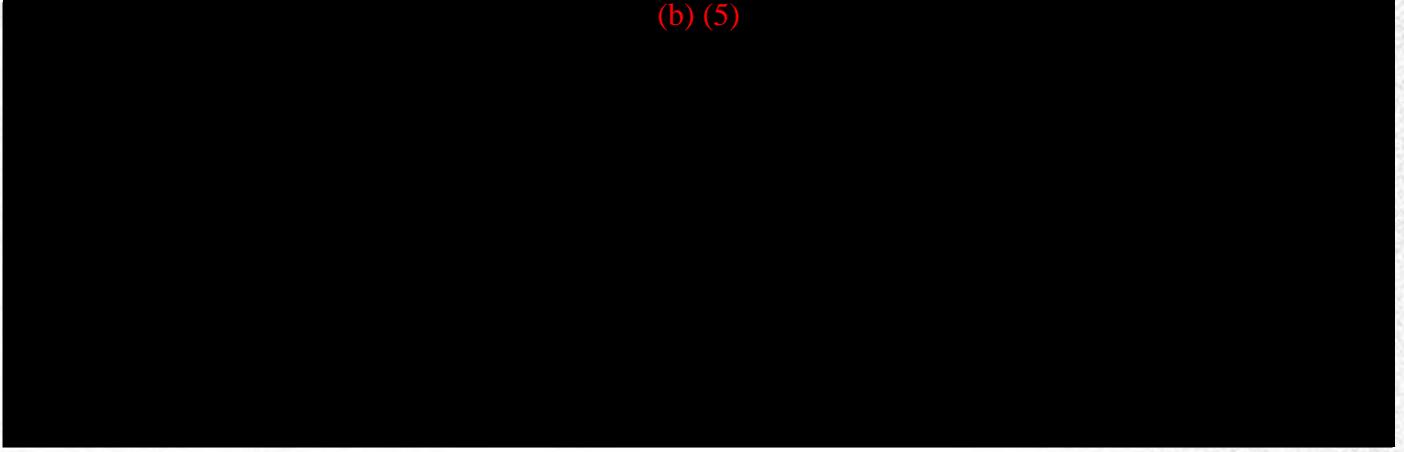
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SPECIAL HANDLING IN ACCORDANCE WITH OPNAVINST 3750.6 SERIES

PART VIII - CONCLUSIONS

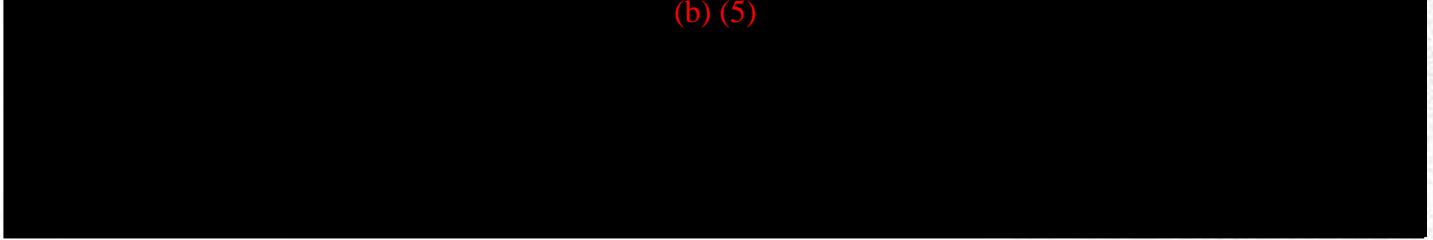
(b) (5)



PART IX - RECOMMENDATIONS

The Board recommends that:

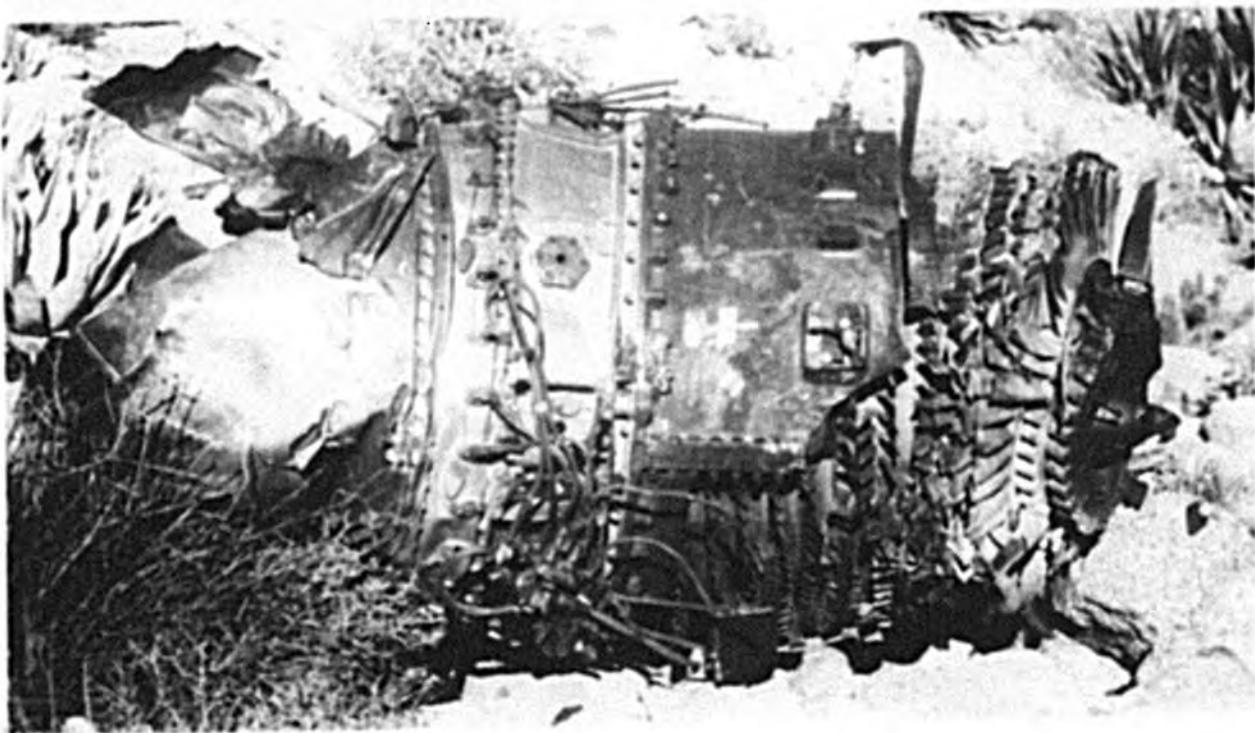
(b) (5)



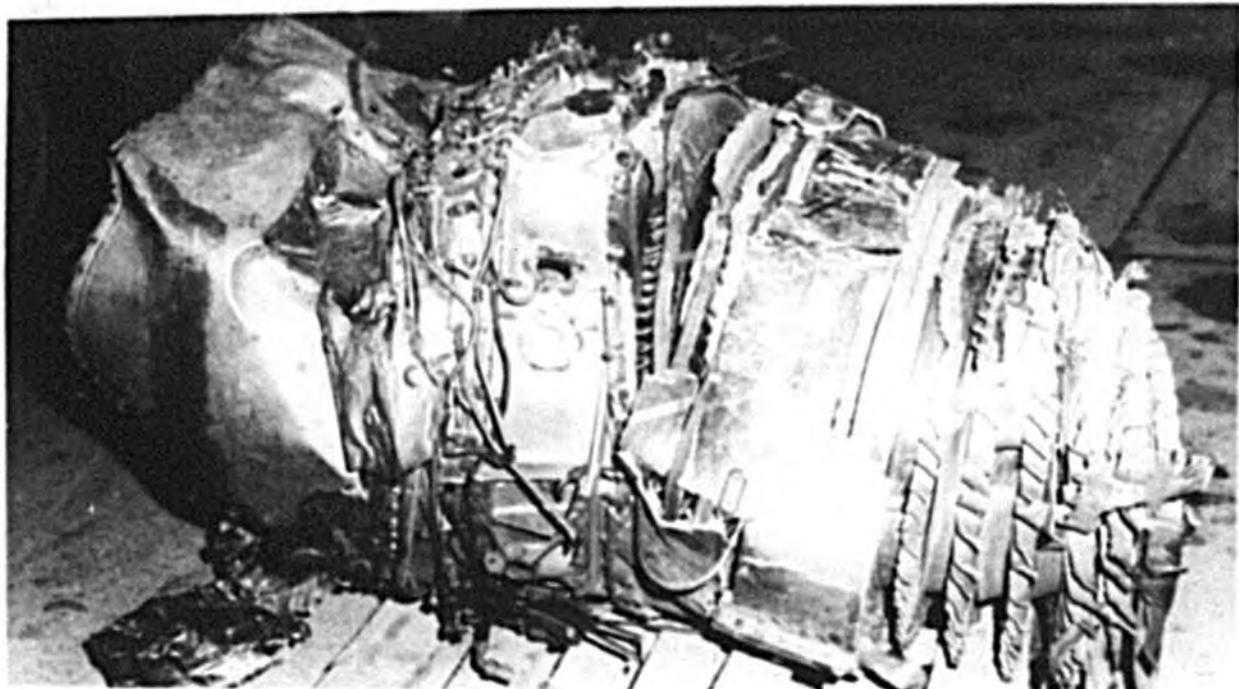
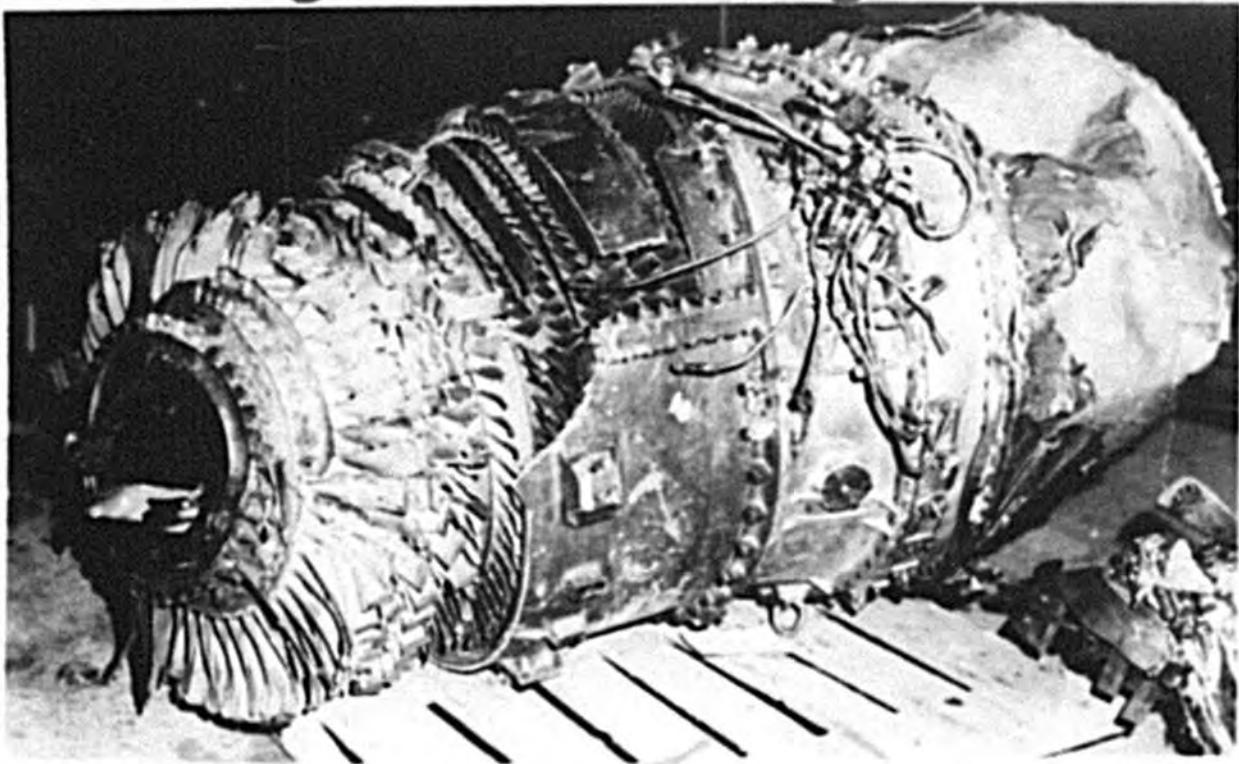


FLIGHT PATH
135° M

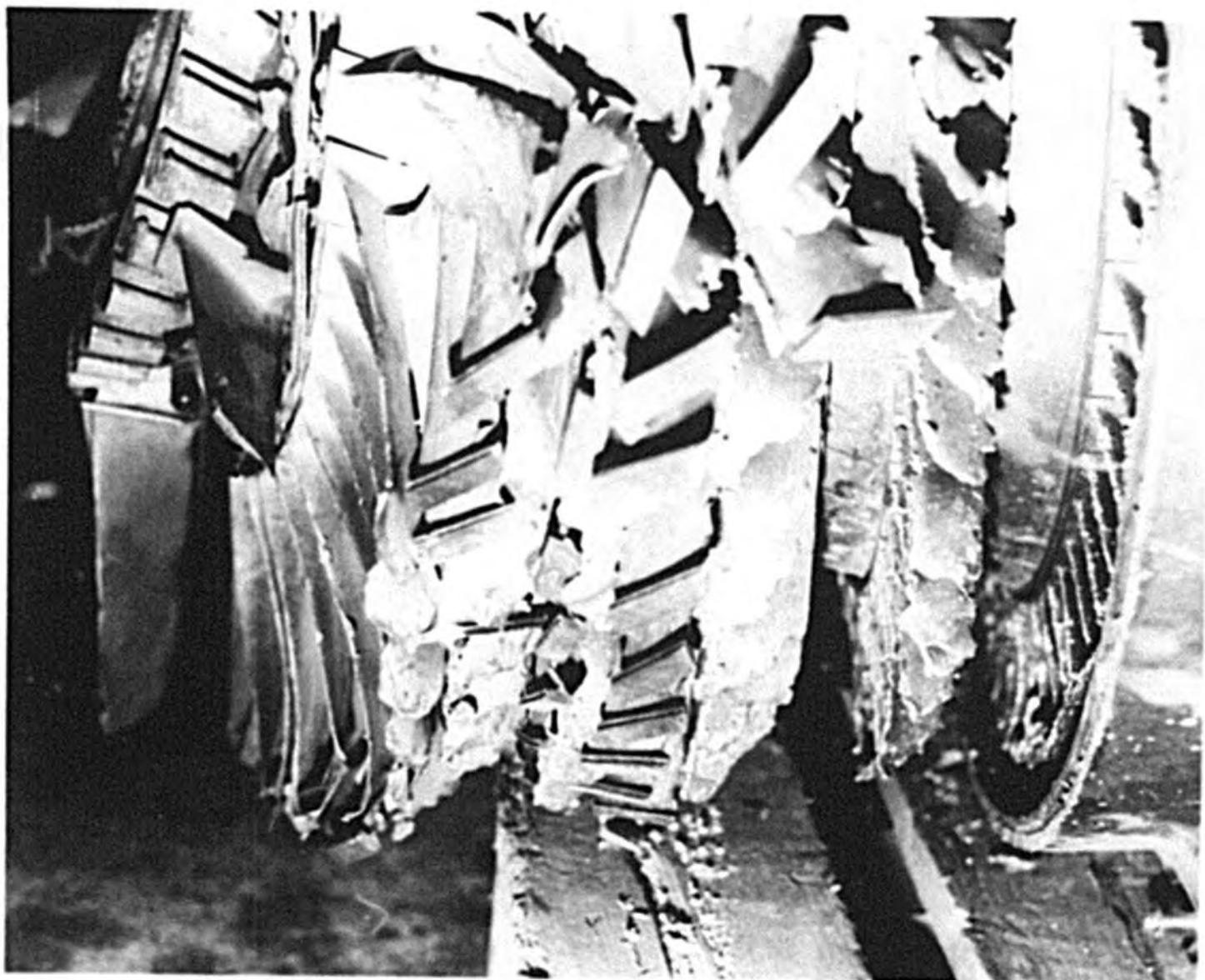
ENCLOSURE (4) 1-IMPACT POINT, 2-TURBINE, 3-HORIZONTAL STABILIZER,
4-COMPRESSOR SECTION.
NAS LOS ALAMITOS 3-68A, 4-17-68
A-4A, BU NO 137828, pilot SHAFER, VA-773
SPECIAL HANDLING REQUIRED IAW OPNAVINST 3750.6 SERIES



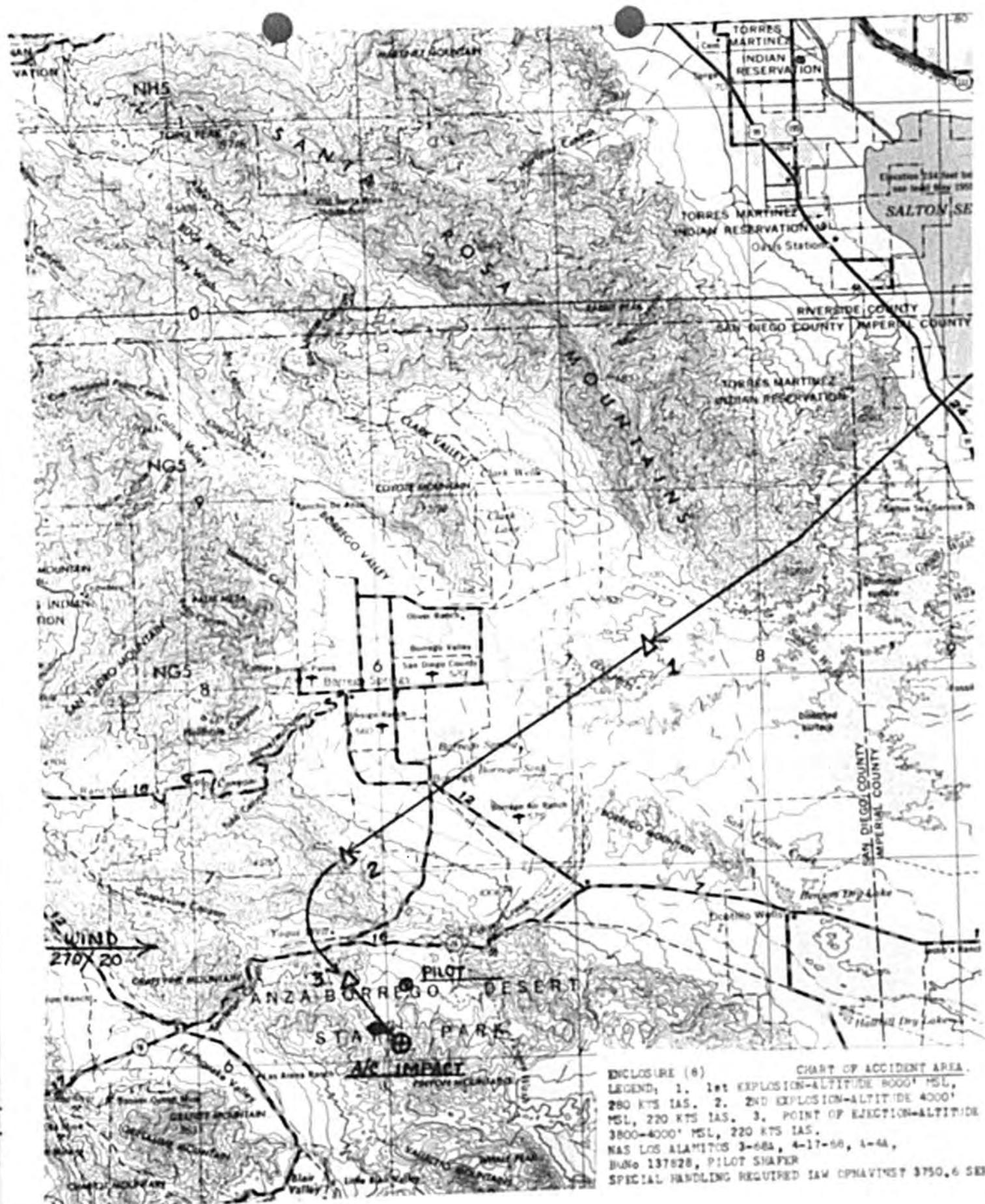
ENCLOSURE (5) COMPOSITE VIEW OF ENGINE AND TURBINE AS FOUND AT CRASH SITE.
NAS LOS ALAMITOS 3-68A, 4-17-68
A-4A, BU NO 137828, pilot SHAFER, VA-773
SPECIAL HANDLING REQUIRED LAW OPNAVINST 3750.6 SE 15



ENCLOSURE (6) COMPOSITE PHOTO OF ENGINE COMPRESSOR SECTION.
NAS LOS ALAMITOS 3-68A, 4-17-68
A-4A, BUNO 137828, pilot SHAFER, VA-773
SPECIAL HANDLING REQUIRED IAW OPNAVINST 3750.6 SERIES



ENCLOSURE (7) 1st STAGE COMPRESSOR BLADE SUSPECTED OF FAILURE
NAS LOS ALAMITOS 3-68A, 4-17-68
A-4A, BUNO 137828, pilot SHAFER, VA-773
SPECIAL HANDLING REQUIRED IAW OPNAVINST 3750.6 SERIES



ENCLOSURE (6)

CHART OF ACCIDENT AREA.

LEGEND: 1. 1st EXPLOSION-ALTITUDE 8000' MSL,
280 KTS TAS. 2. 2ND EXPLOSION-ALTITUDE 4000'
MSL, 220 KTS TAS. 3. POINT OF EJECTION-ALTITUDE
3800-4000' MSL, 220 KTS TAS.
NAS LOS ALAMITOS 3-684, 4-17-68, 4-44,
BONO 137828, PILOT SHAFER
SPECIAL HANDLING REQUIRED IAW CPHAVINST 3750.6 SERIES

SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH OPNAVINST 3750.6 SERIES

AIRCRAFT MAINTENANCE OFFICER'S STATEMENT

A-4A BUNO 137828 was received by NAS Los Alamitos on 28 December 1966. Following completion of progressive aircraft rework at NAS Alameda on 22 December 1966. The 4th calendar inspection was completed on the aircraft on 10 March 1968. It had flown 517.5 hours since the last P.A.R., and 29.0 hours since its last calendar inspection, including the flight of 1.1 hours on the flight terminating with the accident.

The engine, Serial W-617041, was installed at NAS Los Alamitos on 24 November 1967 with zero hours since overhaul. At the time of the accident it had flown 68.1 hours since overhaul and 29.0 hours since the last calendar inspection. Its last overhaul was completed at NAS Alameda on 10 October 1967, and shipped to NAS North Island for custody. The engine was shipped from NAS North Island to NAS Los Alamitos on 18 October 1967.

Since installation of engine Serial W-617041 on 24 November 1967, the following engine discrepancies and corrective actions were recorded:

1. 2 December 1967.

DISCREPANCY: T.P.T. 680° at 99.5% RPM.

CORRECTIVE ACTION: Jet-Cal Engine and Adjusted T.P.T. to 655° at 99.8% RPM.

2. 3 December 1967.

DISCREPANCY: T.P.T. 670° on take off at 99.5% RPM.

CORRECTIVE ACTION: Jet-Cal Engine. Found error in last Jet-Cal. Set engine at 99.9% RPM with 655° on Jet-Cal. Air Temp. 64°. Tagged E.P.I. Gauge to correction.

3. 7 December 1967.

DISCREPANCY: After take off and airplane cleaned up, loud grating noises occurred from unknown source, accompanied with minor airframe vibration and when power was reduced, it momentarily subsided and then began again. (An immediate landing was executed without further investigation).

CORRECTIVE ACTION: Removed engine and sent to IMA. Re-installed engine and retrimmed. No vibrations. All systems normal. E.P.I. Gauge reads 100% RPM - T.P.T. 655°. Jet-Cal reads 100.2% RPM, TFT 655°, Runway Temp. 55°.

4. 11 January 1968.

DISCREPANCY: On climbout had 670° EGT at 99.5% held less than 10 seconds.

CORRECTIVE ACTION: Adjusted Max RPM 100.4% EGT 657°. Runway Temp. 66°. Jet-Cal RPM 100.4% EGT 657°. Aircraft RPM 100.2%, EGT 657°.

5. 13 January 1968.

DISCREPANCY: (Info) An unidentifiable whine noise when RPM of Approximately 80% is selected. Increase RPM and it goes down considerably. Noticed it first on deck at about 70% RPM. 670° TPT on take off. Reduced to 99% RPM to decrease temperature.

CORRECTIVE ACTION: Connected incompletely installed ducting. (Air Conditioning turbine ducting fittings not secured tightly).

SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH OPNAVINST 3750.6 SERIES

The aircraft was flown 55.3 hours since correction of the vibration discrepancy on 7 December 1967 without further vibration discrepancies. Since the last EGT discrepancy on 13 January 1968, the aircraft was flown 58.3 hours without further EGT discrepancies. For the last 10 flights of the aircraft, 5 were discrepancy free and 5 downing discrepancies were recorded; 3 discrepancies on pressurization surge, 1 on turn needle being too sensitive and 1 on windshield air requiring cycling several times before it operated properly. The pressurization surge was corrected by changing the air control valve. All other discrepancies were also corrected and the aircraft was completely free of discrepancies on its last three flights. A Parts on Order for a port wing transfer valve was outstanding, therefore, the aircraft was configured with a centerline tank.

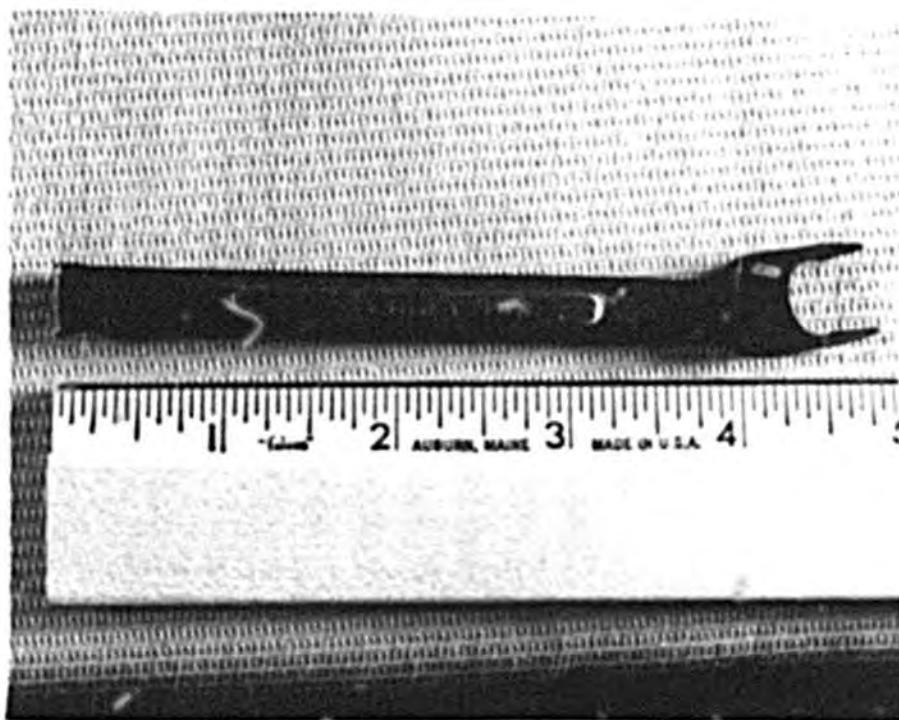
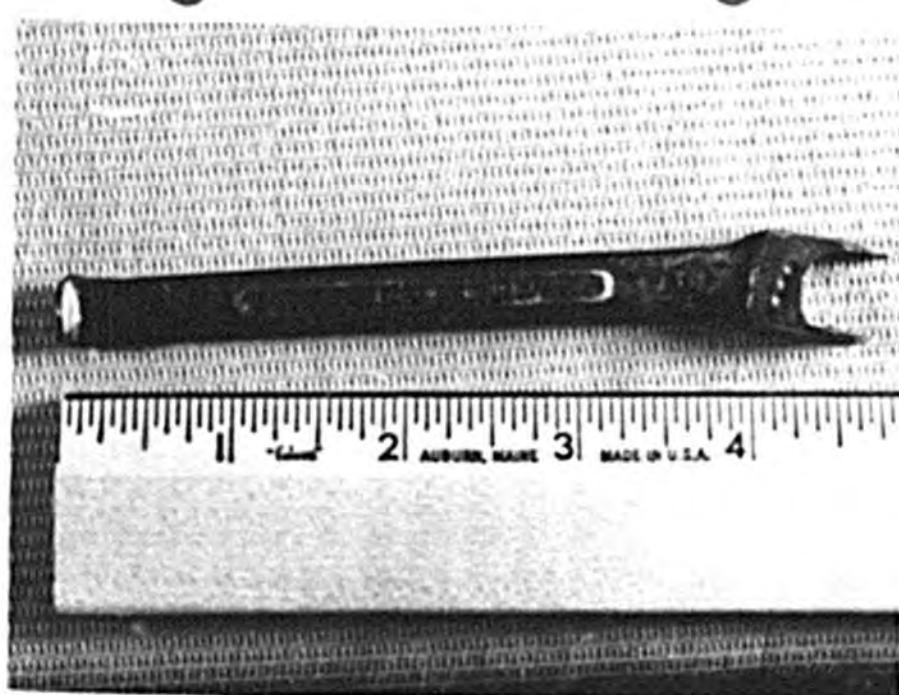
The record of RDT and EGT data, as recorded on Part C of the yellow sheet since installation of engine Serial W-617041, is as follows:

<u>DATE</u>	<u>RDT</u>	<u>EGT (Start)</u>	<u>EGT (T.O.)</u>
<u>1967</u>			
12-2	115	640	670
12-3	115	610	670
12-7	116	605	660
12-21	100	610	610
<u>1968</u>			
1-8	98	600	-
1-10	110	605	610
1-11	120	620	670
1-13	-	-	-
1-13	115	680	670
1-14	115	630	630
1-14	70	570	-
1-17	-	625	665
1-19	120	615	-
1-19	120	630	-
1-20	118	620	630
1-21	120	630	640
1-24	125	625	-
1-24	105	720	-
1-25	120	650	650
1-26	121	640	635
1-27	120	620	650
1-28	115	590	645
1-28	117	600	650
3-15	115	630	660
3-20	112	650	660
3-21	112	640	650
3-21	114	660	670
3-22	115	670	650
3-24	120	620	600
3-27	118	610	625
3-28	120	620	630
4-3	118	630	645
4-4	110	650	640
4-5	110	630	620
4-6	114	630	630
4-10	-	670	650
4-11	115	680	660

(b) (6)

Note: - Indicates No Log Entry

CDR USNR-R (JAR)



ENCLOSURE (10) WRENCH FOUND AT IMPACT POINT
NAS LOS ALAMITOS 3-68A, 4-17-68
ADIA, BUNO 137828, PILOT SHAFER
SPECIAL HANDLING REQUIRED IAW OPNAVINST 3750.6 SERIES

SPECIAL HANDLING IN ACCORDANCE WITH OPNAVINST 3750.6 SERIES

Statement of the Aircrew Survival Equipment Officer.

ESCAPE SYSTEM

Ejection was initiated after a flame out at approximately 3500 MSL, straight and level flight. The ejection seat used was a Douglas Escape-I Ground Level Escape System. Ejection was accomplished by use of the face curtain and worked as designed. The seat had Aircrew System Change No. 48 incorporated and Interim Aircrew System Bulletins 138 and 144 performed while in calendar inspection.

SURVIVAL EQUIPMENT

Type Parachute: NB-9 Serial #143618 manufactured by Reliance 09-60.

Type Actuator: M/S 10000' 14,000' aneroid setting

Type Cartridge: Mk5 Mod 1-2 sec delay Lot #1 IHM 0667

All current directives had been incorporated.

Parachute and Bail-out O2 system functioned normally.

The difficulty encountered with the day end of the MK-13 MOD 0 day/night distress signal, as noted in the pilot's statement, could not be investigated as the failed flare was not returned to NAS Los Alamitos. The other flare contained in the pilot's MK-3C Life Preserver was tested and it functioned normally. The tested flare was Lot number 50 HK-0465-195. An inspection of other survival equipment at NAS Los Alamitos in which the flares are carried, revealed that each flare contained in a particular piece of equipment was of the same Lot number as the others in the piece of equipment. In view of this, it is assumed that the failed flare was of the same Lot number as the one tested.

(b) (6)



(b) (6) LT USN

R 012302Z MAY 68
FM NAVAIREWORKFAC ALAMEDA
TO RUWJMUA/NAVAIRSYSCOM REPAC
INFO RUEBBHB/NAVAIRSYSCOMHQ
RUWJMUA/COMNAVAIRPAC
RUWJMUA/NAS LOS ALAMITOS
RUWJMUA/NAF EL CENTRO
RUCILSA/NAVAUNSAFECEC NORVA
ZEN/COMFAIRALAMEDA
RUCLMHA/CNAIRRA
RUEDGGA/CNAESTRA
RUEDHRA/NAVAIRTECHSERVFAC PHILA
RUEDDOA/NAVAIRSYSCOM TECH REP WOODRIDGE
RUEDBUA/DCASO WOODRIDGE
RUEDHOA/NAVAIREWORKFAC CUONPT
BT

459 A/68
Coy MM

UNCLAS

NAVAIRSYSCOMREPAC PASS TO 331.
INVESTIGATION OF J65-MIGA ENGINE 617641 FROM A-4A BUNO 137828
A. YOUR 230213Z APR 68 (NOTAL)
B. NAS LOS ALAMITOS 201745Z APR 68 (NOTAL)
C. NAS LOS ALAMITOS AAR 3-68A
D. FORCON D. BAKER NAVAIRSYSCOMREPAC AND C. DAMGAARD THIS FACILITY
ON 30 APR 68
1. ENGINE COMPRESSOR AND TURBINE SECTION HAVE SEVERE EVIDENCE OF
IN-FLIGHT FAILURE AND DAMAGE.
2. ENGINE SEVERELY DAMAGED AT IMPACT. EVIDENCE OF VERY LOW RPM AT
TIME OF IMPACT.
3. RECOVERED ALL BUT NINE FIRST STAGE COMPRESSOR ROTOR BLADES 231817
(J65 PPC 26). ALL BLADES SHOW ROTATIONAL AND IMPACT DAMAGE. TWO FIRST
STAGE BLADES HAD BLADE TIP BROKEN OFF APPROX 3 1/4 INCHES ABOVE BLADE
PLATFORM. BLADE TIPS NOT RECOVERED. ONE BLADE EXHIBITS A POSSIBLE
FATIGUE CONDITION. CAUSE OF THIS CONDITION UNDETERMINED. BROKEN BLADE
WITH FATIGUE INDICATIONS FORWARDED TO CURTISS WRIGHT SERVICE ENGINEERING
VIA LOREP. CURTISS WRIGHT AGREED TO FURTHER METALLURGICAL STUDY OF
BROKEN BLADE. FIRST STAGE BLADES HAVE A TOTAL OPERATING TIME OF 63.1
HOURS.
4. ALL SECOND STAGE COMPRESSOR ROTOR BLADES 225155 AND THIRD STAGE
229156 RECOVERED. ALL BLADES HAVE ROTATIONAL AND IMPACT DAMAGE. NO
BLADE FAILURE.
5. FOURTH, FIFTH, SIXTH, AND SEVENTH-STAGE COMPRESSOR ROTOR BLADES
DAMAGED AND BROKEN. APPROX 26 BLADES IN EACH STAGE BROKE AT THE PLATFORM.
BELIEVED CAUSED BY IMPACT.
6. EIGHTH THRU THIRTEENTH STAGE COMPRESSOR ROTOR BLADES SEVERELY
DAMAGED.
7. RECOVERED 28 SEVERELY DAMAGED INLET GUIDE VANES 222886, 28 VANES
MISSING.
8. RECOVERED 31 SEVERELY DAMAGED FIRST STAGE COMPRESSOR STATOR VANES
222501, 25 MISSING.
9. RECOVERED 44 SEVERELY DAMAGED SECOND STAGE COMPRESSOR STATOR VANES,
TWELVE MISSING.
10. LESS THAN ONE-THIRD OF COMPRESSOR CASE WAS RECOVERED. MOSTLY REAR
PORTION. SCATTERED QUANTITIES OF AFT COMPRESSOR STATOR VANES RECOVERED.
11. ONE FRONT MAIN BEARING SUPPORT STRUT AND OIL PUMP RECOVERED FROM
FRONT MAIN BEARING SUPPORT. THREE-FOURTHS OF FRONT MAIN BEARING SUPPORT
MISSING.
12. ALL TURBINE ROTOR FIRST STAGE BLADES HAD BLADE TIPS BURNED OFF DUE
TO OVER-TEMPERATURE CONDITION CAUSED BY OVERFUELING DUE TO DAMAGED
COMPRESSOR.
13. ALL MAIN ENGINE BEARINGS WERE SATISFACTORY EXCEPT FOR IMPACT DAMAGE.
14. IAW REF D RECOMMEND NAVAIRSYSCOM TECH REP WOODRIDGE TAKE PARAGRAPH
THREE FOR ACTION. CONDUCT METALLURGICAL STUDY OF BROKEN BLADE WITH
FATIGUE CONDITIONS. UPON COMPLETION NOTIFY ALCON RESULTS OF FINDINGS
UNDER YOUR CONTROL 2614-68. FORWARD BROKEN BLADE AND ANY BLADE
SPECIMENS TO NAVAVNSAFECEN NORVA. ACCIDENT INVESTIGATION DIVISION,
ATTENTION MR. (b) (6)

15. CONCLUDE THAT REPORTED IN-FLIGHT EXPLOSION ORIGINATED IN FRONT OF
COMPRESSOR IN AREA OF INLET GUIDE VANE AND FIRST STAGE COMPRESSOR ROTOR.
CAUSE OF COMPRESSOR FAILURE UNDETERMINED. THREE POSSIBLE CAUSES ARE
FOREIGN OBJECT DAMAGE, INLET GUIDE VANE OR CARRIER WING FAILURE, OR
FIRST-STAGE COMPRESSOR ROTOR BLADE FAILURE. METALLURGICAL INVESTIGATION
OF BROKEN FIRST STAGE COMPRESSOR ROTOR BLADE AT CURTISS WRIGHT MAY
ASSIST IN MORE POSITIVE CONCLUSIONS.
16. UNLESS INVESTIGATION AT CURTISS WRIGHT REVEALS POSITIVE FINDINGS,
THIS WILL COMPLETE ACTION THIS FACILITY YOUR CONTROL 2614-68.

MESSAGE DRAFT

FD 4462 (Rev 2/50)

(b) (6)

CLASSIFICATION

UNCLASSIFIED

PP-1 NAVAL AVIATION
SAFETY CENTER

(b) (6)

DATE: 29 APRIL 1968

DEP.

A.I.

(b) (6)

ACTION

NARTU HAS LOS ALAMITOS

V P R I O R I T Y V	
Mess	
Night	
Message	
X	Reulic
	X
Priority	
Op. Immed.	
Emer.	
	Flesh

INFO [REDACTED]

COMNAVAIRSYSCOMHQ

TEXT

UNCLAS E F T O

ANA BUNO 137828 ACCIDENT

1. WRECKAGE RELEASED TO SENIOR MEMBER OF BOARD.
2. INSTRUCTIONS CONTAINED IN OPNAVINST 3750.6F, PAGE 20, PARA 32D APPLY.

REFERENCE MESSAGE

TRANSMIT BY RADIO --	CLASS OF REF.	CWO	TO: COMNAVSAC OFFICE	DATE/TIME GROUP
				291740Z

A-4A /137828

NARTU
LOS ALAM, to S

4-17-68

NNNNZCZCNASCBA10CZCBLA912
RTTUZYUW RUVJMUAB713 1140213-UUUU--RUCILSA,
ZRR UUUUU
R 030213Z APR 68
FM NAVAIRSYSCOMREPAC
TO RUMJHVA/NAS LOS ALAMITOS
RUWHHVA/NAVAIREWORKFAC ALAMEDA
INFO RUEBBHB/NAVAIRSYSCOMHQ
ZEN2/NAF EL CENTRO
RUCILSA/NAVAIRVNSAFCE
ZEN2/COMFAIRALAMEDA
ZEN2/CNAIRRA
ZEN2/CNARESTRA
ZEN1/COMNAVPAIRPAC
BT
UNCLAS

A&BUNO 137828 ACCIDENT INVEST
A. NAS LOS ALAMITOS 271745Z APR 68
B. COMNAVPAIRPAC/BWFRRPAC INST 4732.8A
1. FROM CODE 3312. NAS LOS ALAMITOS: THIS CONFIRMS MY CONTROL
NR 2614-68 MENTIONED REF A.
2. NAVAIREWORKFAC ALAMEDA: REQ CONDUCT ENGRG ALAL J65WIGA ENG
S/H 617841 AND SELECTED ACCESSORY ITEMS FROM SUBJ ACCIDENT IAW

B4/4/68

Cog m+m

PAGE TWO RUVJMUAB713 UNCLAS
REF B: ADCON RESULTS WITH TWO COPIES THIS CMD, CODE 331. ABOVE
CONTROL NR ASGD.

BT

Apr
230213 Z

NNNNZCZCNASC6410CZCSLA912
RTTUZYUW RUWJMUA8713 1142213-UUUU--RUCILSA.

ZNR UUUUU
R 230213Z APR 68
FM NAVAIRSYS COMREPAC
TO RUWJMVA/NAS LOS ALAMITOS
RUWMHVA/NAVAIREWORKFAC ALAMEDA
INFO RUEBBHB/NAVAIRSYS COMHQ
ZEN2/NAF EL CENTRO
RUCILSA/NAVAIVNSAFCEC
ZEN2/COMFAIRALAMEDA
ZEN2/CNATRA
ZEN2/CNARESTRA
ZEN1/COMNAVAVIPAC
BT
UNCLAS

A4A-BUNO=137528 ACCIDENT INVEST

A. MAS LOS ALAMITOS 271745Z APR 68
B. CONNAVAVIPAC/BWFRKPAC INST 4732.BA
1. FROM CODE 3312. MAS LOS ALAMITOS: THIS CONFIRMS MY CONTROL
NR 2614-68 MENTIONED REF A.
2. NAVAIREWORKFAC ALAMEDA: REQ CONDUCT ENGRG ALAL J65W16A ENG
S/N 617341 AND SELECTED ACCESSORY ITEMS FROM SUBJ ACCIDENT IAW

PAGE TWO RUWJMUA8713 UNCLAS
REF B. ADCON RESULTS WITH TWO COPIES THIS CMD, CODE 331. ABOVE
CONTROL NR ASGD.

BT

B4/4/68

Cog m+m

Apr
230213Z

NNNNZCZCNASC5410CZCSLA912
RTTUZYUW RUWJMUAS713 1142213-UUUU--RUCILSA.

ZRR UUUUU

R 230213Z APR 68

FM NAVAIRSYSCOMREPAC

TO: RUWJHVA/RAS LOS ALAMITOS

RUWMHVA/NAVAIREWORKFAC ALAMEDA

INFO RUEBBB# /NAVAIRSYSCOMHQ

ZEN2/XAF EL CENTRO

RUCILSA/NAVAIRNSAFCEN

ZEN2/COMFAIRALAMEDA

ZEN2/CHATRA

ZEN2/CNARESTRA

ZEN1/COMNAVAVIRPAC

BT

UNCLAS

14A BUNO 137828 ACCIDENT INVEST

A. TAS LOS ALAMITOS 2614-68 APR 68

B. COMNAVAVIRPAC/3WFRRPAC INST 4732.8A

1. FROM CODE 3312. WAS LOS ALAMITOS1 THIS CONFIRMS MY CONTROL

NR 2614-68 MENTIONED REF A.

2. NAVAIREWORKFAC ALAMEDA: REQ CONDUCT ENGRG ALAL J65W1SA ENG
S/N 617241 AND SELECTED ACCESSORY ITEMS FROM SUBJ ACCIDENT IAW

3410/68

Copy mnm

CORRECTED Copy

PAGE TWO RUWJMUAS713 UNCLAS

REF B. ADCON RESULTS WITH TWO COPIES THIS CMD, CODE 331. ABOVE
CONTROL NR ASGO.

BT

Apr

230213Z

XZCNASCB3273L0307
PTTUZYOW RUWJNVA0037 1111727-0010-000000
ZNR UUUUU
P 201745Z APR 68
FM NAS LOSALAM
TO RUWJMUA/NAVAIRSYSCOMRPAQ
INFO RUWMHVA/NARF ALAMEDA
RUWMHVA/COMFAIR ALAMEDA
RUWJMUA/COMNAVAIRFAQ
RUEBBHB/NAVAIRSYSCOMHQ
RUCILSA/NAVAVSAFCEN
RUWJNTA/NAF EL CENTRO
RUCLMHA/CNATRA
RUEDGGA/CNARESTA
BT
UNCLAS
PRIORITY FAILURE/MALFUNCTION INVESTIGATION
A. NAVAIRSYSCOMRPAQ INST 4730, RA
B. TELECON IS APRIL MR. (b) (6) YOUR COMMAND AND MR. (b) (6) OF
NAVAVSAFCEN.
C. **NAS-LOS-ALAMitos AAR 3-68A**
1. REQUEST VERIFY PRIORITY (DIR) CONTROL NUMBER 26-14-68 ASSIGNED TO
AAA BUNO 137828.
2. ENGINE J-65W16A SERIAL 617861 AND SELECTED ACCESSORY ITEMS FROM
AAA BUNO 137828.
3. ENGINE TO BE DELIVERED TO NARF ALAMEDA ON 22 APRIL 68. ACCCOMPANIED
BY NAVAVNSAFCEN INVESTIGATOR ARMENTROUT AND ENGINER/ACCESSORY LOGS
RECORDS.
BT

3 305/68

APR 1
APR 2

HPR
27445

H5WZFR1FG QRMOI
PTTUZYUW RUWJNVA0218 1100010-UUUU--RUCILSA.

ZNR UUUUU
P 190040Z APR 68
FM NAF LOSALAM
TO RUEAARAA/CNO
RUCILSA/NAVAVNSAFECECEN
INFO RUEBBHB/NAVAIRSYSCOMHCG
RUWJHEA/COMELEVEN
RUCLNHA/CNATRA
RUEDGGA/CNARESTRA
RUWJNDA/NAVPLANIREPO LBEACH
RUEDDOR/NAVPLANIREPO WOODRIDGE
RUWMMFA/COMREDAT KCARAIRWING FOUR
RUWMMFA/COMREDAT KCARAIRWING ONE TWO
RUHHBRA/CINCPACFLT
RUWJMUA/COMNAVAIRPAC
RUCILMA/COMNAVAIRLANI
RUHHFMA/FMFPAC
RUEBNVA/FMFLANT
RUEBBHB/CHNAVMAT
RUWJMUA/NAVAIRSYSCOMREPAC
RUWJNTA/NAVAERORECFAC EL CENTRO
BT

355A/68

SUPP AAR

UNCLAS FOR OFFICIAL USE ONLY
SUPPLEMENTARY MESSAGE REPORT OF AIRCRAFT ACCIDENT
A. OPNAVINST 3752.6A
B. EL CENTRO 180420Z APR 68 NOTAL

1. 17 APR 68, 1520U, DAY *Preliminary* *Shows* *Basis 137828*
2. A-4A, *137823*, NAF LOS ALAMITOS AAF 3-68A *verified by A.I. Investigator*
3. 290 DEG MAG 40 NM FM IMPERIAL VORTAC (IMP)
4. JERRY PAUL SHAFFER, LT, *(b) (6)*, USNR, VA-773 STANP, GOLF
5. NONE
6. ALFA

SWE. *4/17/68*

PAGE TWO RUWJNVA0218 UNCLAS

7. LOW LEVEL NAVIGATION
8. ENGINE FAILURE - COLLISION - GROUND - UNCONTROLLED
9. MUFFLED ENGINE EXPLOSION FOLLOWED BY RAPID TPT RISE AND VIBRATION.
ENGINE RAN ROUGH FOR ABOUT 5 MINS THEN FLAMED OUT
10. 5500 BKN, VIS UNLIMITED
11. UNKNOWN
12. DIR WILL BE REQUESTED, ON ENGINE J-65W16A, S/N W617041, FUEL
CONTROL S/N H157973 AND RELATED ACCESSORIES
13. NO CHANGE
14. NONE
15. NO PRIVATE PROPERTY INVOLVED. CRASH SITE IN REMOTE UNPOPULATED AREA
NE SECTION ANZA BORREGO DESERT STATE PARK, CALIFORNIA.
(b) (6) LCDR, AVIATION SAFETY OFFICER/SR. MBR AAR BD.

398-5478 EX1 412 *137828*

BT A-4A *137828*

NAF Los Alamitos

3-68A 4-17-68

MESSAGE DRAFT

SND 4002 (Rev 2-63)

CLASSIFICATION

UNCLASSIFIED

FROM	NAVAL AVIATION SAFETY CENTER	DRAFTED BY	(b) (6)	DEPT.	RELEASED
		LCDR		OOD	LCDR
ACTION	V M A C C I D E N C E V				INFO
NAS LOS ALAMITOS ATKRON SEVEN SEVEN THREE					CNO
					NAVAIRSYSCOMIQ
					NAVAIRSYSCOMREPPAC
					COMNAVAIRPAC
					CNARESTRA
					NAVAIRSYSCOMREPO LONG BEACH
					DCASO WOODRIDGE
TEXT					

UNCLAS E F T O

A4A BUNO 137826 ACCIDENT

1. MR. (b) (6) AIR SAFETY SPECIALIST, CLEARED TOP SECRET, WILL ARRIVE SAN DIEGO VIA UNITED AIR LINES FLT 103 AT 1307, 18 APRIL 1968, TO CONDUCT NAVAVNSAFECEN INVESTIGATION OF SUBJECT ACCIDENT.
2. INSTRUCTIONS CONTAINED IN OPNAVINST 3750.6F, PAGE 14, PARA 24 B, AND PAGE 20, PARA 32A, (PRESERVATION OF WRECKAGE) APPLY.

REFERENCE MESSAGE

TRANSMIT BY RADIO --	CLASS OF REF.	CWD	FOR CONS. OFFICE	DATE/TIME GROUP
				181215Z

86417104

RHQNASC9146B356
PTIUZYUW RUWJNTA3251 1090415-UUUU--RUCILSA.

146 B | 68

ZNR UUUUU
P R 100420Z APR 68
FM NAF EL CENTRO
TO RUENAAA/CNO
RUCILSA/NAVAVNSAFcen
RUBBBHB/NAVAIRSYSCOM
RUWJNVA/NAS LOS ALAMITOS
RUWJAPA/COMFAIRMIRAMAR
INFO RUWJHEA/COMELEVEN
RUWJNVA/CO ATKRON SEVEN SEVEN THREE
RUEDGGA/CWARESTRA
RUWJMUA/COMNAVAIRPAC
RUBBBHB/CHNAVMAT
RUHHBRA/CINCPACFLT

AAR
ALFA

BT
UNCLAS FOR OFFICIAL USE ONLY
NAVY PRELIMINARY MESSAGE REPORT OF AIRCRAFT ACCIDENT

A. OPNAVINST 3750.6F

1. 171520U APR, DAY
2. 285 DEG/47NM IMPERIAL VORTAC; 091 DEG/13NM JULIAN VORTAC
3. A4-A, BUNO 137828 *Correct Buno # per AI Investigator 4/9/68*

PAGE TWO RUWJNTA3251 UNCLAS

4. NAS LOS ALAMITOS

5. ALFA DUE TO IMPACT

6. SHAFFER, JERRY P. LT., (b) (6) NAVY, 1315, RESERVE, G
PILOT EXPERIENCE: TOTAL TIME 1500 HRS, 1100 HRS IN TYPE, 30 HRS
LAST 90 DAYS, RAPEC, ALT 4000, 250 KTS

7. NA

8. NA

9. LOW LEVEL NAV

10. RETURNING TO NAS LOS ALAMITOS

11. ONE (1) ENG EXPLOSION FOLLOWED BY HIGH EGT FOLLOWED FOUR
(4) MINS LATER BY ANOTHER EXPLOSION AND FLAMEOUT

12. 8000 SCID

13. ENGINE FAILURE

14. UNKNOWN

15. NA

16. ACCESSIBLE BY US HWY 78

17. LCDR (b) (6) NAS LOS ALAMITOS EXT 412

B7

86417164 APR
100420Z

A-4A /137828 NAS Los ALAMITOS (unk) 4-17-68